



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|------------------------------|------------------------|
| 10/823,067 | 04/12/2004 | Kelan C. Silvester | 1020.P18444 | 3989 |
| Kacvinsky LLC c/o Intellevate P.O. Box 52050 Minneapolis, MN 55402 | | | EXAMINER KANE, CORDELLA P | |
| | | | ART UNIT 2432 | PAPER NUMBER |
| | | | MAIL DATE 05/01/2009 | DELIVERY MODE PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/823,067

Applicant(s)

SILVESTER ET AL.

Examiner

CORDELIA KANE

Art Unit

2432

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12 and 13 is/are pending in the application.
- 4a) Of the above claim(s) 14-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 25, 2009 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1 – 10, 12 – 19, 28 and 29 have been considered but are moot in view of the new ground(s) of rejection.

Election/Restrictions

3. Newly amended claims 14 – 19, 28 and 29 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the claims are directed to the following patentably distinct species:

- a. Species 1: Claims 1 – 13 as disclosed in paragraphs [0044]-[0054] of the specification teaches storing Z types of factors, and then receiving N factors to compare against the Z factors for authentication (the N factors being less than Z).

- b. Species 2: Claims 14 – 19, 28 and 29, which do not appear to be disclosed in the specification, teach the N factors being stored and Z factors being received for comparison (where N is less than Z).
- 4. The species are independent or distinct because claims to the different species recite the mutually exclusive characteristics of such species. In addition, these species are not obvious variants of each other based on the current record.
- 5. Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 14 – 19, 28 and 29 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.
- 6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

- 7. Claims 1, 2, 4, 6 – 8, 10, 12, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Borza's US Patent 6,076,167.
- 8. Referring to claim 1, Borza teaches:
 - c. At least a first input mechanism to receive first multi-factor authentication data associated with Z authentication factors of Z types, the Z types of authentication data are each different (column 11, lines 44-48).

- d. A cryptographic engine to encrypt the first multi-factor authentication data (column 7, lines 55-57).
 - e. A separated user authentication non-volatile data store to store the encrypted first multi-factor authentication data (column 8, lines 23-25, Figure 3, Element 58).
 - f. A first processing unit to determine whether second multi-factor authentication data received via that at least first input mechanism matches a subset of the first multi-factor authentication data (column 15, lines 5-6), the second multi-factor authentication data associated with N authentication factors of N different types where N is less than Z and greater than 1 (column 12, line 64-column 13, line 47).
 - g. The first processing unit to authenticate using the second multi-factor authentication data comprising the subset of the stored first multi-factor authentication data (column 7, line 66-column 8, line 4) where less than Z authentication factors are available for authentication (column 13, line 2-16).
 - h. A user being authenticated if the second authentication data matches the subset of the first authentication data (column 7, line 66-column 8, line 4).
9. Referring to claim 2, Borza teaches that one of the inputs is a biometric sample (column 13, lines 42-44).
10. Referring to claim 4, Borza teaches that the processor if a digital signal processor (column 3, lines 1-4).

11. Referring to claim 5, Borza teaches implementing a security technology to provide for protected execution (column 8, lines 23-25).
12. Referring to claim 6, Borza teaches that there is a second processor separate from the first processor (Figure 3, Element 54).
13. Referring to claim 7, Borza teaches:
 - i. A first processor to execute instructions, a first non-volatile memory, a bus coupled to the processor and first non-volatile memory (Figure 3).
 - j. Receiving first multi-factor user authentication data of Z different types (column 11, lines 44-48).
 - k. A second separated non-volatile memory to store an encrypted version of the first multi-factor user authentication data (column 8, lines 23-25, Figure 3, Element 58).
 - l. A second user authentication processor to determine whether second multi-factor user authentication data matches at least a corresponding subset of the first multi-factor user authentication data (column 15, lines 5-6), the second multi-factor user authentication data including authentication data of N different types where N is less than Z and greater than 1 (column 12, line 64-column 13, line 47).
 - m. The second user authentication processor to authenticate using the second multi-factor user authentication data corresponding to the subset of the first multi-factor user authentication data (column 7, line 66-column 8, line 4)

where less than Z authentication factors are available for authentication (column 13, line 2-16).

14. Referring to claim 8, Borza teaches a cryptographic engine to encrypt the first user authentication data prior to storage (column 7, lines 55-57).

15. Referring to claim 10, Borza teaches that one of the inputs is a biometric sample (column 13, lines 43-44).

16. Referring to claims 12 and 13, Borza teaches that the second non-volatile memory is physically separated, as well as logically separated, from the first non-volatile memory (Figure 3).

Claim Rejections - 35 USC § 103

17. Claims 3, 5 and 9 are rejected under 35 USC 103 (a) as being obvious over Borza and further in view of Harris. Borza discloses all the limitations of the parent claim. Borza does not appear to explicitly disclose using the Trusted Platform Module or protected execution. However, Harris discloses:

n. Using a Trusted Platform Module, and including the cryptographic engine (column 9, line 66 – column 10, line 4). (claims 3 and 9)

o. Utilizing one of the specifications that provide protected execution (column 10, lines 10-11). (claim 5)

18. Borza and Harris are analogous art because they are from the same field of endeavor, networks. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Borza and Harris before him or her, to

modify Borza to include the Trusted Platform Module that provides protected execution of Harris. The motivation for doing so would have been that it provides a more secure and trusted computing platform (column 10, lines 10-11).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CORDELIA KANE whose telephone number is (571)272-7771. The examiner can normally be reached on Monday - Thursday 8:00 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/823,067
Art Unit: 2432

Page 8

/C. K./
Examiner, Art Unit 2432

/Benjamin E Lanier/
Primary Examiner, Art Unit 2432